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Before the United States Patent and Trademark Office

Inventor/Applicant: Wallin; Arne B

Serial No.: 10/553101

Title : Modular Wall System with Footing Form

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PCT NO: PCT/CA04/00559

Art Unit : 3635

Examiner : Jessica Laux

Agent: David J French

Director
Patent Office
Arlington, Virginia

November 15, 2010

Dear Sir/Madam:

Declaration Under 37 CFR 1.132
in Response to Final Office Action

This is a declaration being made by the inventor/applicant in respect of the above application, in response to the Examiner's office action of August 16, 2010.

I am the inventor herein and, being presently 72 years old, have spent 50 years in the construction industry. For the last 43 years I have been a custom home builder wherein I have assumed the entire responsibility for building a number of homes and other buildings.

I am the inventor named in the following US patents:

United States Patent 5,864,999 issued February 2, 1999 for "Modular wall system"

United States Patent 6,244,005 issued June 12, 2001 for "Modular wall system"

This latter patent is the same patent applied by the Examiner in the office action of August 16, 2010.

I have actually constructed a house near Bass Lake just west of Barrie, a city in Ontario that is some 60 miles north of Toronto, Canada. This house was constructed in the summer of 2004 by myself and my son using the technique of US patent 6,244,005 to build the

basement walls. Photographs of this house and the walls as constructed may be seen at the website, www.in-wall.com. The link "photos", beginning under the title "completed installation", depicts this construction.

These walls were built by first precasting a concrete footing in the manner as described in US patent 6,244,005 and separately precasting walls having flange forms made of galvanized steel and an upper galvanized steel trough to form an upper beam. No inverted lower trough form was present and at the time that I began construction on this house it had never occurred to me that such a lower footing form could be employed.

At this particular jobsite the precast walls were lowered into place over the precast footings once the bed for the footings had been prepared by compacting gravel. When everything was lined up, a concrete truck came in and filled the upper trough formed on each of the wall panels. The concrete flowed down the openings within the flange forms and came out of the bottom, exposed to the outside air. Some of the concrete spread sideways into a channel formed in the concrete footing where my son and I had previously installed reinforcing bar.

While this pouring occurred I was in attendance at the base of the wall panels holding a trowel, observing, and ready to assist the concrete as it flowed out of the flange forms into the trough present in the precast footing form. The trowel was present in case I needed it to shove concrete along the trough in the footing and thereby ensure that this entire trough became filled. It was not clear before we began this process that the concrete would successfully flood-out from the base of each vertical flange form in sufficient quantity to fill the trough present on either side of the footing form where each flange met with the precast footing.

During the pouring of the concrete into the forms of this former design we found that the concrete flooded out around the base of the flanges due to the hydraulic pressure developed within the flanges. To limit this excess flow we only filled the flanges partially, to a height of approximately 2 feet. We then let the concrete partially set before filling the rest of the forms. This was not a satisfactory way to carry out the pour.

To correct this problem for future installation it occurred to me that it might be possible to provide an inverted form at the base of these walls that would confine the concrete flooding-out and direct the concrete to either side of the vertical flange forms. If this would work, it would allow a footing to be cast at the same time. I was not altogether certain that this could be done. I was concerned that the hydraulic pressure developed within the flange forms by the height of the concrete slurry resident therein would be limited by the friction of the stiff concrete as it piled up at the bottom of each flange form. It might be necessary to employ a flow-grade concrete. Nevertheless, I could see advantages to such an arrangement if it would work. Many of these advantages are identified on the website www.in-wall.com.

At the same time we had commissioned a University professor, Dr. Drysdale of McMaster University in Hamilton, Ontario, to validate the design of US patent 6,244,005 for purposes

of government certification. Dr. Drysdale had already proceeded to carry out initial testing of that earlier design. When we approached him to discuss the concept of the new design, Dr. Drysdale was absolutely confident that the new design would work and was, in fact, of the opinion that the new design would be stronger than the earlier design.

Subsequently I proceeded with building a foundation for a custom home using the configuration of the present invention. In doing so, I was able to demonstrate that the concrete, if sufficiently fluid, would under hydraulic pressure flood-out the footing form sufficiently to ensure a continuous footing between flanges. This was particularly achievable by using flow-grade concrete and providing vibration within the concrete slurry while it was being poured into the flange forms. Such vibration made the concrete behave as if it were more liquid.

As a consequence of making this discovery I contacted my patent attorney and proceeded with the preparation and filing of the present application.

I have reviewed the Response presently being filed in respect of this application and confirm that the features of this invention as determined by myself include as stated in that Response, the features that:

a) the footing form is filled through a flange form;
b) the footing form in the present invention is filled from a vertical source that is positioned above the footing form;
c) the footing form in the present invention is not filled laterally from the core of the adjacent wall that is being cast at the same time, and
d) the footing form in the present invention is filled progressively proceeding longitudinally along the length of the footing form.

This declaration has been filed in support of my application to obtain a patent based upon the present application and specification that I have cause to be filed herein.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,

Arne Wallin Arne Wallin Nov. 15, 2010.